FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 15:43:48 ON 29 APR 2005

L1	231380	S OBESITY
L2	122791	S WEIGHT LOSS
L3	334542	S L1 OR L2
L4	2213	S RESISTANT STARCH
L5	43	S L3 AND L4
L6	24	DUP REM L5 (19 DUPLICATES REMOVED)

L6 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:351443 CAPLUS
TITLE: In vitro and in vivo digestibility of recrystallized amylose and its application for low glycemic foods
AUTHOR(S): Morita, Tatsuya; Hayashi, Junya; Motoi, Hirofumi; Yagishita, Takahiro; Takeya, Koji; Sugiyama, Kimio; Kiriyama, Shuhachi
CORPORATE SOURCE: Dept. of Applied Biological Chemistry, Faculty of Agriculture, Shizuoka Univ., Shizuoka, 422-8529, Japan
SOURCE: Journal of Food Science (2005), 70(3), S179-S185
CODEN: JFDSAZ; ISSN: 0022-1147
PUBLISHER: Institute of Food Technologists
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To predict physiol. functions of recrystd. amylose (RCA), the true **resistant starch** (RS) content of RCA in the small intestine was directly measured using ileorectostomized rats where the distal ileum was anastomosed to the rectum (the cecum and colon were surgically resected together). The estimated in vivo **resistant starch** content of RCA was the same as the value obtained from the in vitro enzymic RS determination (.apprx.50%). RCA resistance to amylolytic enzymes in the small intestine was retained even after RCA incorporation into processed foods, and a bread containing 20% RCA showed a significantly lower glycemic response in rats compared with that of a control bread. Also, RCA ingestion significantly and dose-dependently decreased the body fat accretion and lowered serum concns. of cholesterol and triglycerides in rats compared with cornstarch. These lipid-lowering effects of RCA were comparable to those obtained with high-amylose cornstarch. The restricted energy value as well as suppressed insulin response with RCA ingestion might be related to preferable changes in lipid metabolism These nutritional properties of RCA may suggest a possible benefit as an alternative source of **resistant starch** for preventing diabetes, hyperlipidemia and **obesity**, and so on.

L6 ANSWER 2 OF 24 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:124638 BIOSIS
DOCUMENT NUMBER: PREV200500129597
TITLE: The baker's toolbox for developing health-promoting products.
AUTHOR(S): Erickson, W. [Reprint Author]
CORPORATE SOURCE: Cargill Food and Pharma Specialties NA, Minneapolis, MN, USA
SOURCE: Cereal Foods World, (January 2005) Vol. 50, No. 1, pp. 6-8. print.
ISSN: 0146-6283 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Apr 2005
Last Updated on STN: 1 Apr 2005

L6 ANSWER 3 OF 24 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2004384132 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15287677
TITLE: **Resistant starch**: metabolic effects and potential health benefits.
AUTHOR: Higgins Janine A
CORPORATE SOURCE: University of Colorado Health Sciences Center, Center for Human Nutrition, Box C225, 4200 E. Ninth Ave, Denver, CO 80222, USA.. Janine.Higgins@UCHSC.edu
SOURCE: Journal of AOAC International, (2004 May-Jun) 87 (3) 761-8. Ref: 78
Journal code: 9215446. ISSN: 1060-3271.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200410
ENTRY DATE: Entered STN: 20040804
Last Updated on STN: 20041026
Entered Medline: 20041025
AB Although there is strong evidence that the amount and type of fat in the diet can have dramatic effects on metabolism, the case for carbohydrate

subtypes influencing metabolic parameters is emerging. By definition, **resistant starch** (RS) is any starch that is not digested in the small intestine but passes to the large bowel. Here, RS is a good substrate for fermentation which gives rise to an increase in short-chain fatty acid production. The differing rates of absorption between RS and digestible starch are thought to denote their differential metabolic responses. RS intake is associated with several changes in metabolism which may confer some health benefits. RS intake seems to decrease postprandial glycemic and insulinemic responses, lower plasma cholesterol and triglyceride concentrations, improve whole body insulin sensitivity, increase satiety, and reduce fat storage. These properties make RS an attractive dietary target for the prevention of diseases associated with dyslipidemia and insulin resistance as well as the development of **weight loss** diets and dietary therapies for the treatment of Type 2 diabetes and coronary heart disease. This review analyzes the body of literature examining the metabolic effects of RS consumption and discusses possible mechanisms whereby increased short-chain fatty acid production in the bowel could account for some of these effects. The effects of RS in the large bowel per se are the topic of other reviews and are not addressed in this paper.

L6 ANSWER 4 OF 24 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2004384131 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15287676
TITLE: Diet and metabolic syndrome: where does **resistant starch** fit in?.
AUTHOR: Tapsell Linda C
CORPORATE SOURCE: Smart Foods Centre, University of Wollongong, Wollongong NSW 2552, Australia.. ltapsell@uow.edu.au
SOURCE: Journal of AOAC International, (2004 May-Jun) 87 (3) 756-60. Ref: 55
Journal code: 9215446. ISSN: 1060-3271.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200410
ENTRY DATE: Entered STN: 20040804
Last Updated on STN: 20041026
Entered Medline: 20041025
AB Metabolic syndrome is a term linking the clinical profiles of some of the world's major health problems today: **obesity**, heart disease, and diabetes. It is predicated on dietary patterns, and particularly on the delivery of fuel. The effects may be seen first in the development of abdominal **obesity** and insulin resistance leading to Type 2 diabetes mellitus and coronary heart disease. This review examines the role **resistant starch** might play in the prevention and management of these conditions. Beginning with a definition of **resistant starch**, a critical review of the scientific literature is presented. Current knowledge suggests that **resistant starch** in the diet may assist in the prevention and management of conditions associated with the metabolic syndrome via its potential effects on delaying the delivery of glucose as fuel with subsequent fat utilization and appetite control benefits. There is still a great deal of research to be undertaken in this area, but it is clearly warranted, given the position of starches in the global food supply and the potential impact on population health.

L6 ANSWER 5 OF 24 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 3
ACCESSION NUMBER: 2004:425688 BIOSIS
DOCUMENT NUMBER: PREV200400422778
TITLE: Whole grains and human health.
AUTHOR(S): Slavin, Joanne [Reprint Author]
CORPORATE SOURCE: Dept Food Sci and Nutr, Univ Minnesota, 1334 Eckles Ave, St Paul, MN, 55108, USA
jslavin@umn.edu
SOURCE: Nutrition Research Reviews, (June 2004) Vol. 17, No. 1, pp. 99-110. print.
CODEN: NREREX. ISSN: 0954-4224.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Nov 2004
Last Updated on STN: 3 Nov 2004

L6 ANSWER 6 OF 24 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2004339604 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15242012
TITLE: **Resistant starch** supplementation influences blood lipid concentrations and glucose control in overweight subjects.
AUTHOR: Park Ock Jin; Kang Nam E; Chang Moon Jeong; Kim Woo Kyoung
CORPORATE SOURCE: Department of Food and Nutrition, Hannam University, 133 Ojeong-Dong, Daedeok-Gu, Daejeon 306-791, Korea.
SOURCE: Journal of nutritional science and vitaminology, (2004 Apr) 50 (2) 93-9.
Journal code: 0402640. ISSN: 0301-4800.
PUB. COUNTRY: Japan
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200411
ENTRY DATE: Entered STN: 20040710
Last Updated on STN: 20041117
Entered Medline: 20041116

AB **Resistant starch** (RS) includes the sum of starch and degradation products of starch that resist small intestinal digestion and enter the colon. This study was planned to examine the effect of **resistant starch** on hypolipidemic actions, blood glucose, insulin levels and humoral immune responses in healthy overweight subjects. Healthy overweight subjects (over 120% of their ideal body weights) were fed either 24 g/d of resistant corn starch (RS) or regular corn starch (CS) for 21 d with their regular meals. Although this double-blind feeding regiment resulted in no significant changes in their weights or other physical parameters for the relatively acute period of intakes, there were significant lowering effects of serum total cholesterol ($p < 0.05$) and serum LDL-cholesterol ($p < 0.05$) in subjects supplemented RS. Compared with the control starch group, the RS supplementation also reduced the mean fasting serum glucose concentrations ($p < 0.05$). **Resistant starch** supplement resulted in the increase in serum immunoglobulin G (IgG) concentrations. Serum insulin and complement 3 (C3) were unaffected. Tested **resistant starch** supplementation was reported to be palatable with minimal bowel discomfort. These results suggest that RS supplementation improves the blood lipid profile and controls the blood glucose levels in healthy overweight subjects without bowel discomfort. Therefore, RS has a potential to be used as one of the promising food ingredients for reducing risk factors involved in the development of atherosclerosis and type 2 diabetes in overweight individuals. However, in order to prove RS as a novel therapeutic agent of cardiovascular diseases and diabetes, controlled trials with larger sample sizes and longer duration are warranted.

L6 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:398758 CAPLUS
DOCUMENT NUMBER: 141:122947
TITLE: The role of **resistant starch** consumption in **weight loss**
AUTHOR(S): Higgins, Janine
CORPORATE SOURCE: Center for Human Nutrition, University of Colorado Health Sciences Center (UCHSC), Denver, CO, 80222, USA
SOURCE: Agro Food Industry Hi-Tech (2004), 15(1), 45-47
CODEN: AIHTEI; ISSN: 1722-6996
PUBLISHER: Tekno Scienze srl
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Extensive research shows that **resistant starch** (RS) ingestion attenuates postprandial glucose and/or insulin concns. and has pos. health effects in the large bowel. However, less is known about the impact of RS consumption on fat oxidation and storage. Convincing rat data exists demonstrating that chronic RS ingestion decreases total fat storage, as indicated by lower fat pad wts. and lower incorporation of 14C-glucose into triglyceride in fat cells from animal fed a high RS diet relative to those rats on a low RS diet. However, there is no human data which examines fat storage and scarce data on fat oxidation in response to RS consumption. The small amount of data on fat oxidation is equivocal and further studies are needed but this data does not dismiss the possibility that RS consumption may indeed increase

postprandial fat oxidation Evidence exists that RS ingestion does increase satiety which, even in the absence of fat oxidation and storage data, implicates RS supplementation as a useful tool in designing optimal **weight loss** and maintenance diets.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 24 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2003386116 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12742545
TITLE: Effect of **resistant starch** from corn or rice on glucose control, colonic events, and blood lipid concentrations in streptozotocin-induced diabetic rats.
AUTHOR: Kim Woo K; Chung Mi K; Kang Nam E; Kim Myung H; Park Ock J
CORPORATE SOURCE: Dept of Food Science and Nutrition, Dankook University, San 8, Hannam-Dong, Youngsan-Gu, 140-714 Seoul, South Korea.
SOURCE: Journal of nutritional biochemistry, (2003 Mar) 14 (3) 166-72.
Journal code: 9010081. ISSN: 0955-2863.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200310
ENTRY DATE: Entered STN: 20030819
Last Updated on STN: 20031004
Entered Medline: 20031003

AB To examine the effect of two types of **resistant starch** on blood glucose and insulin levels, colonic events, hypolipidemic actions and humoral immune responses, Sprague-Dawley streptozotocin-induced diabetic rats were fed diet containing **resistant starch** from corn or rice. The marked body **weight loss** by inducing diabetes was not recovered by feeding **resistant starch**, even though there are no differences in food intakes compared to the non-diabetic control rats. No significant effect of **resistant starch** feeding on blood glucose and insulin was found. Even though the length of small intestines, and cecum, colon and rectum together with the tissue weight of cecum were not affected by feeding **resistant starch**, the intestinal transit time was markedly shortened by both types of **resistant starch** and **resistant starch** from corn had a more pronounced effect. The short chain fatty acids in the intestinal contents did not appear to be different among the groups. Nonetheless, both of **resistant starch** from corn and rice significantly lowered plasma total lipid and cholesterol concentrations compared to the diabetic control. The total liver cholesterol lowering effect was observed with **resistant starch** from rice. Neither immunoglobulin G nor C(3) were influenced by **resistant starch**.

L6 ANSWER 9 OF 24 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2003219527 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12740067
TITLE: Why whole grains are protective: biological mechanisms.
AUTHOR: Slavin Joanne
CORPORATE SOURCE: Department of Food Science and Nutrition, University of Minnesota, 1334 Eckles Avenue, St Paul, MN 55108, USA.. jslavin@umn.edu
SOURCE: Proceedings of the Nutrition Society, (2003 Feb) 62 (1) 129-34. Ref: 37
Journal code: 7505881. ISSN: 0029-6651.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 20030513
Last Updated on STN: 20031217
Entered Medline: 20031126

AB Epidemiological studies find that whole-grain intake is protective against cancer, cardiovascular disease, diabetes and **obesity**. Potential mechanisms for this protection are diverse since whole grains are rich in nutrients and phytochemicals. First, whole grains are concentrated sources of dietary fibre, **resistant starch** and

oligosaccharides, carbohydrates that escape digestion in the small intestine and are fermented in the gut, producing short-chain fatty acids (SCFA). SCFA lower colonic pH, serve as an energy source for the colonocytes and may alter blood lipids. These improvements in the gut environment may provide immune protection beyond the gut. Second, whole grains are rich in antioxidants, including trace minerals and phenolic compounds, and these compounds have been linked to disease prevention. Additionally, whole grains mediate insulin and glucose responses. Although lower glycaemic load and glycaemic index have been linked to diabetes and **obesity**, risk of cancers such as colon and breast cancer have also been linked to high intake of readily-available carbohydrate. Finally, whole grains contain many other compounds that may protect against chronic disease. These compounds include phytate, phyto-oestrogens such as lignan, plant stanols and sterols, and vitamins and minerals. As a consequence of the traditional models of conducting nutrition studies on isolated nutrients, few studies exist on the biological effects of increased whole-grain intake. The few whole-grain feeding studies that are available show improvements in biomarkers with whole-grain consumption, such as **weight loss**, blood lipid improvement and antioxidant protection.

L6 ANSWER 10 OF 24 MEDLINE on STN
ACCESSION NUMBER: 2004131072 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 15023602
TITLE: **Resistant starch** attenuates colonic DNA damage induced by a high protein diet in rats.
AUTHOR: Toden S; Toden S; Bird A R; Topping D L; Conlon M A
CORPORATE SOURCE: CSIRO Health Sciences and Nutrition, Kintore Avenue, Adelaide, SA 5000.
SOURCE: Asia Pacific journal of clinical nutrition, (2003) 12 Suppl S13.
Journal code: 9440304. ISSN: 0964-7058.
PUB. COUNTRY: Australia
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; IN-DATA-REVIEW; IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20040317
Last Updated on STN: 20041219
AB Background - Diet has a major influence on the development of degenerative diseases of the large bowel and non-digestible carbohydrates appear to protect against colorectal cancer whereas energy, fat and protein are risk factors. Recently, low carbohydrate, high protein diets have become popular as a means of **weight loss**. However, the long-term effects of such diets on the large bowel remain to be established. Objective - To determine if a high protein diet increases colonic DNA damage in rats and whether dietary **resistant starch** can protect against such damage. Design - Male Sprague Dawley rats (about 300 g) were fed a diet containing 15% or 25% casein, each with or without 48% high amylose starch (HiMaize), and after four weeks rats were anaesthetised and tissues and gut contents were collected for mucus thickness, DNA damage (comet assay) and short chain fatty acid measurements. Outcomes - Rats on the high protein diet had greater damage to colonic DNA than those consuming a low protein diet in the absence of **resistant starch** (comet tail moments (mean +/-SEM): 1008+/-107 v 464+/-35) and this was associated with a thinning of the mucus barrier (135+/-5 v 245+/-9 microm). Feeding a high **resistant starch** diet attenuated DNA damage and thinning of the colonic mucus layer. DNA damage and mucus thickness were inversely related. Conclusions - **Resistant starch** may ameliorate colonic DNA damage induced by high dietary protein.

L6 ANSWER 11 OF 24 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:369209 BIOSIS
DOCUMENT NUMBER: PREV200300369209
TITLE: Amylose **resistant starch** decreases body fat in rats.
AUTHOR(S): Hegsted, Maren [Reprint Author]; Francis, Anne R.; McCutcheon, Kathleen L.; Keenan, Michael J.; O'Neil, Carol E.; Gillespie, Michelle S.; Mekary, Rania A.; Martin, Roy J.
CORPORATE SOURCE: Human Ecology, Louisiana State University AgCenter, HUEC Bldg., Baton Rouge, LA, 70803, USA
mhegsted@lsu.edu; afrancis@agcenter.lsu.edu; kmccutc@lsu.edu; mkeenan@lsu.edu; ceoneil@lsu.edu;

mgilles@lsu.edu; rmekar1@lsu.edu; rjmartin@lsu.edu
SOURCE: FASEB Journal, (March 2003) Vol. 17, No. 4-5, pp. Abstract No. 203.15. http://www.fasebj.org/. e-file.
Meeting Info.: FASEB Meeting on Experimental Biology: Translating the Genome. San Diego, CA, USA. April 11-15, 2003. FASEB.
ISSN: 0892-6638 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 13 Aug 2003
Last Updated on STN: 13 Aug 2003

AB Amylose may be useful in **weight loss** since it resists digestion in the small intestine leading to fermentation in the cecum and has lower available energy. Male Wistar rats, 220 g, were fed high amylose cornstarch diet (RS, 32% amylose, n=17) or bioavailable amylopectin cornstarch diet (C, 0% amylose, n=20) for 12 wks. Abdominal fat and lean mass were measured in vivo every 4 wks by peripheral dual energy X-ray absorptiometry. RS rats gained less abdominal fat mass and more abdominal lean mass than C rats at wks 4, 8, and 12. At sacrifice, fat pad weights were lower for RS rats for peri-renal fat ($p<0.002$) and abdominal fat ($p<0.001$), but not epididymal fat. Total abdominal region fat for RS vs C rats was 20.3+2.23 g vs 28.3+2.43 g ($p<0.008$); plasma leptin was 3.2+0.7 ng/ml vs 7.7+2.0 ng/ml for RS and C ($p<0.004$). Total body weight did not differ between groups; disemboweled weight was lower for RS rats (457+13 g RS vs 496+10 g C, $p<0.002$). RS rats ate more diet ($p<0.02$) but gained less weight/g diet ($p<0.003$), due to lower energy in the RS diet. Cecum weight was 3 x higher ($p<0.001$); cecal contents were 7 X higher in RS rats (23.4+1.3 g RS vs 3.2+0.2 g C, $p<0.001$). Cecal pH was lower for RS rats (6.0+0.2 RS vs 7.8+0.2 C, $p<0.001$) confirming fermentation. High amylose cornstarch has potential as a food ingredient to reduce body fat and increase fermentation in the lower GI tract for a healthier colon.

L6 ANSWER 12 OF 24 EMBASE on STN
ACCESSION NUMBER: 2002175130 EMBASE
TITLE: Effect of **resistant starch** on plasma and liver lipids in rats.
AUTHOR: Shao Y.-Y.
CORPORATE SOURCE: Y.-Y. Shao, Department of Food and Nutrition, Shih Chien University, Taipei, Taiwan,Province of China
SOURCE: Nutritional Sciences Journal, (2002) Vol. 27, No. 1, pp. 16-23.
Refs: 40
ISSN: 1011-6958 CODEN: YXZAFD
COUNTRY: Taiwan,Province of China
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
LANGUAGE: Chinese
SUMMARY LANGUAGE: English; Chinese
ENTRY DATE: Entered STN: 20020530
Last Updated on STN: 20020530

AB This study investigated the effect of **resistant starch** (RS) on plasma lipids and liver lipids of Wistar rats intubated with **resistant starch** and cholesterol. Twenty male Wistar rats were randomly divided into 4 groups: the control, cholesterol (cholesterol: 0.2 g/d), low RS (cholesterol: 0.2 g/d; RS: 0.625 g/d) and high RS (cholesterol: 0.2 g/d; RS: 1.25 g/d) groups. After a 2-week study, the total cholesterol (TC), high-density lipoprotein-cholesterol (HDL-C), triglyceride (TG), and total lipids (TL) of the plasma and liver were analyzed. Compared with the cholesterol group, low-level RS significantly reduced the TG of the plasma and the TC, TG and TL of the liver, but had no effect on the TC and TL of the plasma. High-level RS decreased the TC, TG and TL of both plasma and liver, and reduced HDL-C in plasma, but did not change the ratio of HDL-C to TC in plasma.

L6 ANSWER 13 OF 24 CAPLUS on STN
ACCESSION NUMBER: 2001:762749 CAPLUS
DOCUMENT NUMBER: 135:288079
TITLE: Starch sub-types and lipid metabolism
INVENTOR(S): Brown, Ian Lewis; Storlien, Leonard Henry; Brown, Marc Andrew; Higgins, Janine; Tapsell, Linda Clare
PATENT ASSIGNEE(S): Penford Australia Limited, Australia
SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001076394	A1	20011018	WO 2001-AU392	20010406
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2405012	AA	20011018	CA 2001-2405012	20010406
EP 1267642	A1	20030102	EP 2001-919008	20010406
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001009960	A	20030211	BR 2001-9960	20010406
JP 2003529616	T2	20031007	JP 2001-573922	20010406
NZ 521416	A	20041126	NZ 2001-521416	20010406
US 2003045504	A1	20030306	US 2002-9023	20020412
ZA 2002007891	A	20040126	ZA 2002-7891	20021001
NO 2002004722	A	20021129	NO 2002-4722	20021002
US 2004058890	A1	20040325	US 2003-619794	20030715

PRIORITY APPLN. INFO.:
AU 2000-6733 A 20000406
WO 2001-AU392 W 20010406
US 2002-9023 A3 20020412

AB A method is provided for regulating carbohydrate and fat metabolism in an individual, the method comprising replacing a proportion of the individual's daily carbohydrate intake with **resistant starch** and a proportion of the individual's saturated fat intake with unsatd. fat. Also provided are compns. comprising **resistant starch** and unsatd. fats and methods for making and using the same.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 14 OF 24 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2000496336 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10875601
TITLE: Mechanisms for the impact of whole grain foods on cancer risk.
AUTHOR: Slavin J L
CORPORATE SOURCE: Department of Food Science and Nutrition, University of Minnesota, St. Paul 55108, USA.
SOURCE: Journal of the American College of Nutrition, (2000 Jun) 19 (3 Suppl) 300S-307S. Ref: 68
Journal code: 8215879. ISSN: 0731-5724.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200010
ENTRY DATE: Entered STN: 20001027
Last Updated on STN: 20001027
Entered Medline: 20001019

AB Dietary guidance recommends consumption of whole grains for the prevention of cancer. Epidemiologic studies find that whole grains are protective against cancer, especially gastrointestinal cancers such as gastric and colonic, and hormonally-dependent cancers including breast and prostate. Four potential mechanisms for the protectiveness of whole grains against cancer are described. First, whole grains are concentrated sources of dietary fiber, **resistant starch**, and oligosaccharides, fermentable carbohydrates thought to protect against cancer. Fermentation of carbohydrates in the colon results in production of short chain fatty acids that lower colonic pH and serve as an energy source for the colonocytes. Secondly, whole grains are rich in antioxidants, including trace minerals and phenolic compounds, and antioxidants have been proposed to be important in cancer prevention. Thirdly, whole grains are significant sources of phytoestrogens that have hormonal effects related

to cancer protection. Phytoestrogens are thought to be particularly important in the prevention of hormonally-dependent cancers such as breast and prostate. Finally, whole grains mediate glucose response, which has been proposed to protect against colon and breast cancer.

L6 ANSWER 15 OF 24 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2000348273 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10889797
TITLE: Diet composition and insulin action in animal models.
AUTHOR: Storlien L H; Higgins J A; Thomas T C; Brown M A; Wang H Q; Huang X F; Else P L
CORPORATE SOURCE: Metabolic Research Centre, Faculty of Health & Behavioural Sciences, University of Wollongong, NSW, Australia.. len_storlien@uow.edu.au
SOURCE: British journal of nutrition, (2000 Mar) 83 Suppl 1 S85-90. Ref: 46
Journal code: 0372547. ISSN: 0007-1145.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000728
Last Updated on STN: 20000728
Entered Medline: 20000717

AB Critical insights into the etiology of insulin resistance have been gained by the use of animal models where insulin action has been modulated by strictly controlled dietary interventions not possible in human studies. Overall, the literature has moved from a focus on macronutrient proportions to understanding the unique effects of individual subtypes of fats, carbohydrates and proteins. Substantial evidence has now accumulated for a major role of dietary fat subtypes in insulin action. Intake of saturated fats is strongly linked to development of **obesity** and insulin resistance, while that of polyunsaturated fats (PUFAs) is not. This is consistent with observations that saturated fats are poorly oxidized for energy and thus readily stored, are poorly mobilized by lipolytic stimuli, impair membrane function, and increase the expression of genes associated with adipocyte profileration (making their own home). PUFAs have contrasting effects in each instance. It is therefore not surprising that increased PUFA intake in animal models is associated with improved insulin action and reduced adiposity. Less information is available for carbohydrate subtypes. Early work clearly demonstrated that diets high in simple sugars (in particular fructose) led to insulin resistance. However, again attention has rightly shifted to the very interesting issue of subtypes of complex carbohydrates. While no differences in insulin action have yet been shown, differences in substrate flux suggest there could be long-term beneficial effects on the fat balance of diets enhanced in slowly digested/**resistant starches**. A new area of major interest is in protein subtypes. Recent results have shown that rats fed high-fat diets where the protein component was from casein or soy were insulin-resistant, but when the protein source was from cod they were not. These are exciting times in our growing understanding of dietary factors and insulin action. While it has been clear for some time that 'oils ain't oils', the same is now proving true for carbohydrates and proteins.

L6 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:273675 CAPLUS
DOCUMENT NUMBER: 132:321297
TITLE: Physiological functions of buckwheat protein and sericin as resistant proteins
AUTHOR(S): Kato, Norihisa; Kayashita, Jun; Sasaki, Masahiro
CORPORATE SOURCE: Fac. Appl. Biol. Sci., Hiroshima Univ., 1-4-4 Kagamiyama, Higashihiroshima, 739-8528, Japan
SOURCE: Nippon Eiyo, Shokuryo Gakkaishi (2000), 53(2), 71-75
CODEN: NESGDC; ISSN: 0287-3516
PUBLISHER: Nippon Eiyo, Shokuryo Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A review with 15 refs. Although buckwheat protein has high biol. value, its digestibility is relatively low. We have found that this low digestibility is closely associated with its hypocholesterolemic activity in cholesterol-fed rats. This prompted us to investigate the possibility that buckwheat protein has dietary fiber-like effects, including

anti-constipation, anti-**obesity**, and anti-tumor effects. The results we obtained supported this possibility. The silk protein, sericin, is also resistant to several proteases, and has a number of physiol. functions such as strong water-holding capacity and antioxidant activity. These properties suggest that it would exert protective effects against constipation and colon carcinogenesis. In view of these facts, we postulated that low digestibility of dietary protein might improve the functions of the intestine and be beneficial for human health. By drawing an analogy with **resistant starch**, we propose that buckwheat protein and sericin might be "resistant proteins", and discuss their physiol. significance.

L6 ANSWER 17 OF 24 EMBASE on STN

ACCESSION NUMBER: 2000184500 EMBASE
TITLE: Diet composition and insulin action in animal models.
AUTHOR: Storlien L.H.; Higgins J.A.; Thomas T.C.; Brown M.A.; Wang H.Q.; Huang X.F.; Else P.L.
CORPORATE SOURCE: L.H. Storlien, Metabolic Research Centre, Fac. of Health and Behav. Sciences, University of Wollongong, Wollongong, NSW 2522, Australia
SOURCE: British Journal of Nutrition, (2000) Vol. 83, No. SUPPL. 1, pp. S85-S90.
Refs: 46
ISSN: 0007-1145 CODEN: BJNUAV
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 003 Endocrinology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20000615
Last Updated on STN: 20000615

AB Critical insights into the etiology of insulin resistance have been gained by the use of animal models where insulin action has been modulated by strictly controlled dietary interventions not possible in human studies. Overall, the literature has moved from a focus on macronutrient proportions to understanding the unique effects of individual subtypes of fats, carbohydrates and proteins. Substantial evidence has now accumulated for a major role of dietary fat subtypes in insulin action. Intake of saturated fats is strongly linked to development of **obesity** and insulin resistance, while that of polyunsaturated fats (PUFAs) is not. This is consistent with observations that saturated fats are poorly oxidized for energy and thus readily stored, are poorly mobilized by lipolytic stimuli, impair membrane function, and increase the expression of genes associated with adipocyte proliferation (making their own home). PUFAs have contrasting effects in each instance. It is therefore not surprising that increased PUFA intake in animal models is associated with improved insulin action and reduced adiposity. Less information is available for carbohydrate subtypes. Early work clearly demonstrated that diets high in simple sugars (in particular fructose) led to insulin resistance. However, again attention has rightly shifted to the very interesting issue of subtypes of complex carbohydrates. While no differences is insulin action have yet been shown, differences in substrate flux suggest there could be long-term beneficial effects on the fat balance of diets enhanced in slowly digested/**resistant starches**. A new area of major interest is in protein subtypes. Recent results have shown that rats fed high-fat diets where the protein component was from casein or soy were insulin-resistant, but when the protein source was from cod they were not. These are exciting times in our growing understanding of dietary factors and insulin action. While it has been clear for some time that 'oils ain't oils', the same is now proving true for carbohydrates and proteins.

L6 ANSWER 18 OF 24 BIOSIS on STN

ACCESSION NUMBER: 1999:66582 BIOSIS
DOCUMENT NUMBER: PREV199900066582
TITLE: Fibre recommendations throughout the world.
AUTHOR(S): O'Sullivan, Kathryn R. [Reprint author]; Cho, Susan S.
CORPORATE SOURCE: Mediterranean Area, Kellogg Company, Talbot Road, Manchester M16 0PU, UK
SOURCE: International Journal of Food Sciences and Nutrition, (1998) Vol. 49, No. SUPPL., pp. S13-S21. print.
ISSN: 0963-7486.
DOCUMENT TYPE: Article

LANGUAGE: English
ENTRY DATE: Entered STN: 16 Feb 1999
Last Updated on STN: 16 Feb 1999

AB The role of dietary fibre (DF) in the prevention and treatment of constipation has been well recognized for over a century. Currently dietary fibre is considered an important nutrient in reducing the risk of western diseases such as cancer, cardiovascular disease, and diabetes. Data exist to relate dietary fibre intake to certain disease states. However, lack of agreements on what dietary fibre is and how it should be measured often make data interpretation difficult. Between 1972-76, dietary fibre was defined as the remnants of plant components that are resistant to the hydrolysis by human alimentary enzymes. Most dietary fibre intake databases have been developed based on analytical values to meet this definition. Recently, the scientific community has supported the expansion of the definition to include resistant oligosaccharides and **resistant starch** in addition to non-starch polysaccharides and lignin. Except for special products, this new definition would not affect dietary fibre values in most food tables in the next decade. Typical recommendations in various countries are set at 20-30 g of dietary fibre per day. Despite the enormous amount of scientific literature on the benefits of dietary fibre and dietary guidelines, dietary fibre intakes of the general public are well below the recommended levels. The recommended DF intake in the US is 20-30 g/d while actual consumption ranges from 11-13 g/d. In the Arab countries, dietary fibre intake levels have decreased significantly over the past decades as whole grains are replaced with refined grain flours. Fibre-related nutrition education may be required to improve public health related to optimum consumption of fibre-rich foods. Whole grain or bran-enriched food products should be promoted in such nutrition education programmes.

L6 ANSWER 19 OF 24 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 96358070 EMBASE
DOCUMENT NUMBER: 1996358070
TITLE: Effect of high-amylose starch and oat bran on metabolic variables and bowel function in subjects with hypertriglyceridemia.
AUTHOR: Noakes M.; Clifton P.M.; Nestel P.J.; Le Leu R.; McIntosh G.
CORPORATE SOURCE: PO Box 10041 Gouger Street,Adelaide, SA 5000, Australia
SOURCE: American Journal of Clinical Nutrition, (1996) Vol. 64, No. 6, pp. 944-951.
ISSN: 0002-9165 CODEN: AJCNAC
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 017 Public Health, Social Medicine and Epidemiology
018 Cardiovascular Diseases and Cardiovascular Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 961223
Last Updated on STN: 961223

AB We compared the effects of a diet in which .simeq.25% of the carbohydrate was replaced by high-amylose starch with those of a similar diet high in oat bran or low-amylose starch in 23 hypertriglyceridemic subjects who were overweight mostly because of abdominal adiposity. Each diet was consumed for 4 wk in random order and in a crossover fashion. Overall, the diets were high in carbohydrate (> 55% of energy) and low in fat (< 30% of energy); the amount of **resistant starch** in the foods containing high-amylose starch was 17 g in women and 25 g in men. The metabolic effects of specific starches on plasma lipids, fasting and postprandial glucose and insulin profiles, and bowel function were assessed at the end of each intervention. Plasma triacylglycerols (triglycerides) were significantly lower after the oat bran diet than after the other two diets ($P < 0.02$). No other effects on fasting plasma lipids, glucose, or insulin were noted. However, when the high- amylose starch comprised 33% of the carbohydrate content in a test meal, there was a significant but biologically small reduction in the overall postprandial plasma insulin concentration by 17% relative to the low-amylose diet ($P < 0.01$). Both the oat bran and the high-amylose diet resulted in an increased frequency of bowel actions and lower fecal pH ($P < 0.02$) relative to the low-amylose diet. However, unlike the oat bran diet, the high-amylose diet increased short-chain fatty acid concentrations in fecal water by 32% ($P < 0.001$).

L6 ANSWER 20 OF 24 MEDLINE on STN

ACCESSION NUMBER: 97054057 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8898436
TITLE: Nutrition and gastrointestinal disease.
AUTHOR: O'Keefe S J
CORPORATE SOURCE: Gastrointestinal Clinic, Groote Schuur Hospital, South Africa.
SOURCE: Scandinavian journal of gastroenterology. Supplement, (1996) 220 52-9. Ref: 52
Journal code: 0437034. ISSN: 0085-5928.
PUB. COUNTRY: Norway
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970219
Last Updated on STN: 19970219
Entered Medline: 19970121

AB Nutrition and intestinal function are intimately interrelated. The chief purpose of the gut is to digest and absorb nutrients in order to maintain life. Consequently, chronic gastrointestinal (GI) disease commonly results in malnutrition and increased morbidity and mortality. For example, studies have shown that 50-70% of adult patients with Crohn's disease were weight-depleted and 75% of adolescents growth-retarded. On the other hand, chronic malnutrition impairs digestive and absorptive function because food and nutrients are not only the major trophic factors to the gut but also provide the building blocks for digestive enzymes and absorptive cells. For example, recent studies of ours have shown that a **weight loss** of greater than 30% accompanying a variety of diseases was associated with a reduction in pancreatic enzyme secretion of over 80%, villus atrophy and impaired carbohydrate and fat absorption. Finally, specific nutrients can induce disease, for example, gluten-sensitive enteropathy, whilst dietary factors such as fibre, **resistant starch**, short-chain fatty acids, glutamine and fish-oils may prevent gastrointestinal diseases such as diverticulitis, diversion colitis, ulcerative colitis, colonic adenomatosis and colonic carcinoma. The role of dietary antigens in the aetiology of Crohn's disease is controversial, but controlled studies have suggested that elemental diets may be as effective as corticosteroids in inducing a remission in patients with acute Crohn's disease. In conclusion, nutrition has both a supportive and therapeutic role in the management of chronic gastrointestinal diseases. With the development of modern techniques of nutritional support, the morbidity and mortality associated with chronic GI disease can be reduced. On the other hand, dietary manipulation may be used to treat to prevent specific GI disorders such as coeliac disease, functional bowel disease, Crohn's disease and colonic neoplasia. The future development of nutria-pharmaceuticals is particularly attractive in view of their low cost and wide safety margins.

L6 ANSWER 21 OF 24 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 96310908 EMBASE
DOCUMENT NUMBER: 1996310908
TITLE: Nutrition and gastrointestinal disease.
AUTHOR: O'Keefe S.J.D.
CORPORATE SOURCE: Gastrointestinal Clinic, Groote Schuur Hospital,Observatory 7925, Cape Town, South Africa
SOURCE: Scandinavian Journal of Gastroenterology, Supplement, (1996) Vol. 31, No. 220, pp. 52-59.
ISSN: 0085-5928 CODEN: SJGSB8
COUNTRY: Norway
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 006 Internal Medicine
029 Clinical Biochemistry
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 961112
Last Updated on STN: 961112

AB Nutrition and intestinal function are intimately interrelated. The chief purpose of the gut is to digest and absorb nutrients in order to maintain life. Consequently, chronic gastrointestinal (GI) disease commonly results in malnutrition and increased morbidity and mortality. For example, studies have shown that 50-70% of adult patients with Crohn's disease were weight-depleted and 75% of adolescents growth-retarded. On

the other hand, chronic malnutrition impairs digestive and absorptive function because food and nutrients are not only the major trophic factors to the gut but also provide the building blocks for digestive enzymes and absorptive cells. For example, recent studies of ours have shown that a **weight loss** of greater than 30% accompanying a variety of diseases was associated with a reduction in pancreatic enzyme secretion of over 80%, villus atrophy and impaired carbohydrate and fat absorption. Finally, specific nutrients can induce disease, for example, gluten-sensitive enteropathy, whilst dietary factors such as fibre, **resistant starch**, short-chain fatty acids, glutamine and fish oils may prevent gastrointestinal diseases such as diverticulitis, diversion colitis, ulcerative colitis, colonic adenomatosis and colonic carcinoma. The role of dietary antigens in the aetiology of Crohn's disease is controversial, but controlled studies have suggested that elemental diets may be as effective as corticosteroids in inducing a remission in patients with acute Crohn's disease. In conclusion, nutrition has both a supportive and therapeutic role in the management of chronic gastrointestinal diseases. With the development of modern techniques of nutritional support, the morbidity and mortality associated with chronic GI disease can be reduced. On the other hand, dietary manipulation may be used to treat or prevent specific GI disorders such as coeliac disease, functional bowel disease, Crohn's disease and colonic neoplasia. The future development of nutria-pharmaceuticals is particularly attractive in view of their low cost and wide safety margins.

L6 ANSWER 22 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:546593 CAPLUS
DOCUMENT NUMBER: 119:146593
TITLE: An enzyme-**resistant starch** for regulation of blood cholesterol level and body weight
INVENTOR(S): Miwa, Toshiaki; Hidaka, Takayoshi; Hisada, Yoji; Ohfuji, Takehiko; Pomeranz, Yeshajahu
PATENT ASSIGNEE(S): Kanegafuchi Kagaku Kogyo K. K., Japan
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 550060	A1	19930707	EP 1992-122103	19921229
R: DE, FR, GB, IT, NL, SE				
US 5268367	A	19931207	US 1991-814642	19911230
JP 06065082	A2	19940308	JP 1992-359741	19921228
PRIORITY APPLN. INFO.:			US 1991-814642 A	19911230

AB An enzyme-**resistant starch** is effective for lowering LDL-cholesterol level and for preventing **obesity**. The starch is also useful as food and beverage material for the same effects. Thus, starch was treated with α-amylase to obtain an enzyme-**resistant starch**. Anticholesterolemic and antiobesity effects of the starch was tested with hamsters. A tablet was formulated containing the starch 80, corn starch 4, lactose 10, Ca CMC 4, Me cellulose 1.5, and Mg stearate 0.5%.

L6 ANSWER 23 OF 24 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 92224614 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1563255
TITLE: Dietary recommendations for people with diabetes: an update for the 1990s. Nutrition Subcommittee of the British Diabetic Association's Professional Advisory Committee.
AUTHOR: Anonymous
SOURCE: Diabetic medicine : a journal of the British Diabetic Association, (1992 Mar) 9 (2) 189-202.
Journal code: 8500858. ISSN: 0742-3071.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: (GUIDELINE)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199205
ENTRY DATE: Entered STN: 19920607
Last Updated on STN: 19970203
Entered Medline: 19920519
AB The broad principles of the 1982 British Diabetic Association dietary

recommendations remain valid. For the overweight, reduction in energy intake remains the most important aim. Carbohydrate should make up about 50-55% of the dietary energy intake, the majority of this coming from complex sources, preferably foods naturally high in dietary fibre or hydrolysis **resistant starch**. Up to 25 g of added sucrose may be allowed, provided it is part of a diet low in fat and high in fibre, and that it substitutes for an isocaloric amount of fat or high glycaemic index food or other nutritive sweeteners. Some high-carbohydrate diets have been shown to worsen blood glucose control and serum lipid abnormalities. Some previous recommendations for fibre intake have proved unrealistically high and of limited value. A modest increase to 30 g day-1, concentrating on soluble fibre, is recommended. Reduction of fat intake to 30-35% of energy intake remains an important goal which should help to reduce the incidence of cardiovascular disease in people with diabetes and aid **weight loss**. Of this only 10% of total energy should be saturated fat, 10% polyunsaturated fat, and 10-15% may be mono-unsaturated fat. The latter has been shown to provide a useful alternative energy source which may have beneficial effects on blood glucose control and serum lipids. Cholesterol intake should not exceed 300 mg day-1. Protein should comprise about 10-15% of energy intake. Reduction in intake of protein and associated nutrients may help to slow down progression of nephropathy. Limitation of salt intake to 6 g day-1 is recommended. Reduction in fat intake may be relatively more important in Type 2 diabetic patients, whereas limitation in protein intake may be more important in Type 1 diabetes.

L6 ANSWER 24 OF 24 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 10

ACCESSION NUMBER: 1992:164591 BIOSIS
DOCUMENT NUMBER: PREV199293086916; BA93:86916
TITLE: DIETARY RECOMMENDATIONS FOR PEOPLE WITH DIABETES AN UPDATE FOR THE 1990S.
AUTHOR(S): LEAN M E J [Reprint author]; BRENCHLEY S; CONNOR H; ELKELES R S; GOVINDJI A; HARTLAND B V; LORD K; SOUTHGATE D A T; THOMAS B J
CORPORATE SOURCE: NUTRITION SUBCOMMITTEE, BRITISH DIABETIC ASSOCIATION, 10 QUEEN ANNE STREET, LONDON W1M 0BD, UK
SOURCE: Journal of Human Nutrition and Dietetics, (1991) Vol. 4, No. 6, pp. 393-412.
ISSN: 0952-3871.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 31 Mar 1992
Last Updated on STN: 1 Apr 1992

AB The broad principles of the 1982 British Diabetic Association recommendations remain valid. For the overweight, reduction in energy intake remains the most important aim. Carbohydrate should make up about 50-55% of the dietary energy intake, the majority of this coming from complex sources, preferably foods naturally high in dietary fibre or hydrolysis **resistant starch**. Up to 25 g of added sucrose may be allowed, provided it is part of a diet low in fat, high in fibre and that it substitutes for an isocaloric amount of fat or a high, glycaemic index food or other nutritive sweeteners. Some high carbohydrate diets have been shown to worsen glucose control and serum lipid abnormalities. Some previous recommendations for fibre intake have proved unrealistically high and of limited value. A modest increase to 30 g/d, concentrating on soluble fibre is recomended. Reduction of fat intake to 30-35% of energy intake remains an important goal which should help to reduce the incidence of cardiovascular disease in people with diabetes and aid **weight loss**. Of this, only 10% of total energy should be saturated, 10% polyunsaturated and 10-15% may be monounsaturated fat. The latter has been shown to provide a useful alternative energy source which may have beneficial effects on glucose control and serum lipids. Cholesterol intake should not exceed 300 mg/day. Protein should comprise about 10-15% of energy intake. Reduction in protein intake and associated nutrients may help to slow down progression of nephropathy. Limitation of salt intake to 6 g/d is recommended. Reduction in fat intake may be relatively more important in Type 2 diabetic patients, whereas limitation in protein intake more so in Type 1 diabetes.